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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/771,382	01/25/2001	Ian Richard Anselm Peak	8795-24 U1	6450
	7590 11/26/200 IWARZE BELISARIO	EXAMINER		
ONE COMMEI	-	FORD, VANESSA L		
PHILADELPH	TSTREET, SUITE 220 IA, PA 19103	ART UNIT	PAPER NUMBER	
			1645	
			MAIL DATE	DELIVERY MODE
			11/26/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)					
	09/771,382	PEAK ET AL.					
Office Action Summary	Examiner	Art Unit					
	VANESSA L. FORD	1645					
The MAILING DATE of this communication app Period for Reply	ears on the cover sheet with the c	orrespondence address					
A SHORTENED STATUTORY PERIOD FOR REPLY WHICHEVER IS LONGER, FROM THE MAILING DA - Extensions of time may be available under the provisions of 37 CFR 1.13 after SIX (6) MONTHS from the mailing date of this communication. - If NO period for reply is specified above, the maximum statutory period w - Failure to reply within the set or extended period for reply will, by statute, Any reply received by the Office later than three months after the mailing earned patent term adjustment. See 37 CFR 1.704(b).	ATE OF THIS COMMUNICATION 36(a). In no event, however, may a reply be time will apply and will expire SIX (6) MONTHS from cause the application to become ABANDONEI	lely filed the mailing date of this communication. (35 U.S.C. § 133).					
Status							
1)⊠ Responsive to communication(s) filed on <u>08 Au</u>	igust 2008						
·= · · · · · · · · · · · · · · · · · ·	action is non-final.						
<i>,</i> —		secution as to the merits is					
	Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under <i>Ex parte Quayle</i> , 1935 C.D. 11, 453 O.G. 213.						
Disposition of Claims							
4)⊠ Claim(s) <u>33,34,49-52,54,55 and 57-61</u> is/are pe	ending in the application.						
4a) Of the above claim(s) is/are withdraw	- · · ·						
5) Claim(s) <u>33,34,49-52,54,55 and 57-60</u> is/are al							
6)⊠ Claim(s) <u>61</u> is/are rejected.							
7) Claim(s) is/are objected to.							
8) Claim(s) are subject to restriction and/or	election requirement.						
Application Papers	·						
9)☐ The specification is objected to by the Examine							
10) ☐ The specification is objected to by the Examiner 10) ☐ The drawing(s) filed on 30 June 2003 is/are: a)		by the Everniner					
Applicant may not request that any objection to the o							
Replacement drawing sheet(s) including the correcti		• •					
11) The oath or declaration is objected to by the Ex	ammer, Note the attached Office	ACTION OF IOTHER TO-152.					
Priority under 35 U.S.C. § 119							
 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f). a) All b) Some * c) None of: 1. Certified copies of the priority documents have been received. 2. Certified copies of the priority documents have been received in Application No 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)). * See the attached detailed Office action for a list of the certified copies not received. 							
Attachment(s) 1) X Notice of References Cited (PTO-892)	4) ☐ Interview Summary	(PTO-413)					
2) Notice of Traftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Da	ite					
3) Information Disclosure Statement(s) (PTO/SB/08)	5) Notice of Informal P	atent Application					
Paper No(s)/Mail Date	o) Li Other						

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FINAL ACTION

1. This action is responsive to Applicant's amendment and response filed August 8, 2008. Claims 54, 57, 59 and 60 have been amended. Claims 1-32, 35-48, 53 and 56 have been canceled. Claim 61 has been added.

Claims under examination are 33-34, 49-52, 54-55 and 57-61 are under examination.

Rejections Withdrawn

- 2. In view of Applicant's amendment and response the following rejections:
- a) rejection of claims 54-55 and 57-60 under 35 U.S.C. 112, first paragraph (scope of enablement), pages 3-10, paragraph 3 of the previous Office action.
- b) rejection of claims 54-55 and 57-60 under 35 U.S.C. 112, first paragraph (written description) pages 10-17 paragraph 4 of the previous Office action.

New Grounds of Rejection Necessitated by Applicant's Amendment Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

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(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

3. Claim 61 is rejected under 35 U.S.C. 102(a) as anticipated by Masignani et al (WO 99/36544 published July 22, 1999).

Claim 61 is directed to an isolated protein having at least 90% sequence identity to SEQ ID NO:23 or SEQ ID No.35, wherein the isolated protein is immunogenic.

Masignani et al teach proteins from *Neisseria meningitidis* and immunogenic compositions as well as pharmaceutical compositions containing the polypeptide (see the Abstract and pages 29-30). Masignani et al teach that fusion protein that can provide an alternative to direct protein expression (page 20). Masignani et al teach a *N. meningitidis* protein ORF40-1 protein (SEQ ID NO:4) that has the amino acid sequence that is 98.1% identity to SEQ ID NO:23. See the sequence alignment below:

```
Score 2550.5; DB 2; Length 591;
 Query Match
                   98.1%;
 Best Local Similarity
                   86.6%;
                         Pred. No. 4.1e-150;
 Matches 512; Conservative
                        0; Mismatches
                                      0;
                                        Indels
                                                79; Gaps
1;
         1 MNKIYRIIWNSALNAWVVVSELTRNHTKRASATVKTAVLATLLFATVQASANNE----- 54
Qу
          1 MNKIYRIIWNSALNAWVVVSELTRNHTKRASATVKTAVLATLLFATVQASANNEEQEEDL 60
Db
        55 ----- 54
QУ
Db
        61 YLDPVQRTVAVLIVNSDKEGTGEKEKVEENSDWAVYFNEKGVLTAREITLKAGDNLKIKQ
120
        55 -----TDLTSVGTEKLSFSANGNKVNITSDTKGLNFAKETAGTNGDTTVHLN
QУ
101
                    Db
       121 NGTNFTYSLKKDLTDLTSVGTEKLSFSANGNKVNITSDTKGLNFAKETAGTNGDTTVHLN
180
       102 GIGSTLTDTLLNTGATTNVTNDNVTDDEKKRAASVKDVLNAGWNIKGVKPGTTASDNVDF
QУ
161
          Db
       181 GIGSTLTDTLLNTGATTNVTNDNVTDDEKKRAASVKDVLNAGWNIKGVKPGTTASDNVDF
240
```

```
162 VRTYDTVEFLSADTKTTTVNVESKDNGKKTEVKIGAKTSVIKEKDGKLVTGKDKGENGSS
221
          Db
       241 VRTYDTVEFLSADTKTTTVNVESKDNGKKTEVKIGAKTSVIKEKDGKLVTGKDKGENGSS
300
       222 TDEGEGLVTAKEVIDAVNKAGWRMKTTTANGOTGOADKFETVTSGTNVTFASGKGTTATV
QУ
281
          301 TDEGEGLVTAKEVIDAVNKAGWRMKTTTANGQTGQADKFETVTSGTNVTFASGKGTTATV
Db
360
       282 SKDDQGNITVMYDVNVGDALNVNQLQNSGWNLDSKAVAGSSGKVISGNVSPSKGKMDETV
QУ
341
          Db
       361 SKDDOGNITVMYDVNVGDALNVNOLONSGWNLDSKAVAGSSGKVISGNVSPSKGKMDETV
420
       342 NINAGNNIEITRNGKNIDIATSMTPQFSSVSLGAGADAPTLSVDGDALNVGSKKDNKPVR
Qy
401
          421 NINAGNNIEITRNGKNIDIATSMTPQFSSVSLGAGADAPTLSVDGDALNVGSKKDNKPVR
Db
480
       402 ITNVAPGVKEGDVTNVAOLKGVAONLNNRIDNVDGNARAGIAOAIATAGLVOAYLPGKSM
QУ
461
          481 ITNVAPGVKEGDVTNVAQLKGVAQNLNNRIDNVDGNARAGIAQAIATAGLVQAYLPGKSM
Db
540
Qу
       462 MAIGGGTYRGEAGYAIGYSSISDGGNWIIKGTASGNSRGHFGASASVGYQW 512
          Db
       541 MAIGGGTYRGEAGYAIGYSSISDGGNWIIKGTASGNSRGHFGASASVGYQW 591
```

Masignani et al teach a *N. meningitidis* protein ORF40-1 protein (SEQ ID NO:4) that has the amino acid sequence that is 99.3% identity to SEQ ID NO:35. See the sequence alignment below:

Qу 123	64	GATTNVTNDNVTDDEKKRAASVKDVLNAGWNIKGVKPGTTASDNVDFVRTYDTVEFLSAD
Db 253	194	
Qy 183	124	
Db 313	254	
Qy 243	184	IDAVNKAGWRMKTTTANGQTGQADKFETVTSGTNVTFASGKGTTATVSKDDQGNITVMYD
Db 373	314	
Qу 303	244	VNVGDALNVNQLQNSGWNLDSKAVAGSSGKVISGNVSPSKGKMDETVNINAGNNIEITRN
Db 433	374	
Qу 363	304	GKNIDIATSMTPQFSSVSLGAGADAPTLSVDGDALNVGSKKDNKPVRITNVAPGVKEGDV
Db 493	434	
Qy 423	364	TNVAQLKGVAQNLNNRIDNVDGNARAGIAQAIATAGLVQAYLPGKSMMAIGGGTYRGEAG
Db 553	494	
QУ	424	YAIGYSSISDGGNWIIKGTASGNSRGHFGASASVGYQW 461
Db	554	YAIGYSSISDGGNWIIKGTASGNSRGHFGASASVGYQW 591

The protein and pharmaceutical compositions of Masignani et al appear to be the same as the claimed invention.

Since the Office does not have the facilities for examining and comparing applicant's protein and pharmaceutical compositions with the protein and

pharmaceutical compositions of the prior art, the burden is on the applicant to show a novel or unobvious difference between the claimed product and the product of the prior art (i.e., that the protein and pharmaceutical compositions of the prior art does not possess the same material structural and functional characteristics of the claimed protein and pharmaceutical compositions). See <u>In re Best</u>, 562 F.2d 1252, 195 USPQ 430 (CCPA 1977) and In re Fitzgerald et al., 205 USPQ 594.

4. Claim 61 is rejected under 35 U.S.C. 102(a) as anticipated by Peak et al (WO 99/31132 published June 24, 1999).

Claim 61 is directed to an isolated protein having at least 90% sequence identity to SEQ ID NO:23 or SEQ ID No.35, wherein the isolated protein is immunogenic.

Peak et al teach proteins from *Neisseria meningitidis* and pharmaceutical compositions containing the polypeptide (see the Abstract and pages 34-40). Peak et al teach a *N. meningitidis* protein (SEQ ID NO:21) that has the amino acid sequence that is 98.1% identity to SEQ ID NO:23.



Peak et al teach a *N. meningitidis* protein (SEQ ID NO:21) that has the amino acid sequence that is 99.3% identity to SEQ ID NO:35.

```
99.3%; Score 2333; DB 2; Length 591;
 Query Match
 Best Local Similarity 100.0%; Pred. No. 5.5e-140;
 Matches 458; Conservative 0; Mismatches 0; Indels
                                                0;
                                                  Gaps
0;
        4 TDLTSVGTEKLSFSANGNKVNITSDTKGLNFAKETAGTNGDTTVHLNGIGSTLTDTLLNT 63
QУ
          134 TDLTSVGTEKLSFSANGNKVNITSDTKGLNFAKETAGTNGDTTVHLNGIGSTLTDTLLNT
Dh
193
       64 GATTNVTNDNVTDDEKKRAASVKDVLNAGWNIKGVKPGTTASDNVDFVRTYDTVEFLSAD
Qу
123
          194 GATTNVTNDNVTDDEKKRAASVKDVLNAGWNIKGVKPGTTASDNVDFVRTYDTVEFLSAD
Dh
253
       124 TKTTTVNVESKDNGKKTEVKIGAKTSVIKEKDGKLVTGKDKGENGSSTDEGEGLVTAKEV
QУ
183
          254 TKTTTVNVESKDNGKKTEVKIGAKTSVIKEKDGKLVTGKDKGENGSSTDEGEGLVTAKEV
Db
313
       184 IDAVNKAGWRMKTTTANGOTGQADKFETVTSGTNVTFASGKGTTATVSKDDQGNITVMYD
QУ
243
          Db
       314 IDAVNKAGWRMKTTTANGOTGOADKFETVTSGTNVTFASGKGTTATVSKDDOGNITVMYD
373
Qy
       244 VNVGDALNVNQLQNSGWNLDSKAVAGSSGKVISGNVSPSKGKMDETVNINAGNNIEITRN
303
          Db
       374 VNVGDALNVNQLQNSGWNLDSKAVAGSSGKVISGNVSPSKGKMDETVNINAGNNIEITRN
433
       304 GKNIDIATSMTPQFSSVSLGAGADAPTLSVDGDALNVGSKKDNKPVRITNVAPGVKEGDV
Qу
363
          Dh
       434 GKNIDIATSMTPOFSSVSLGAGADAPTLSVDGDALNVGSKKDNKPVRITNVAPGVKEGDV
493
       364 TNVAQLKGVAQNLNNRIDNVDGNARAGIAQAIATAGLVQAYLPGKSMMAIGGGTYRGEAG
QУ
423
          494 TNVAOLKGVAONLNNRIDNVDGNARAGIAOAIATAGLVOAYLPGKSMMAIGGGTYRGEAG
Db
553
Qy
       424 YAIGYSSISDGGNWIIKGTASGNSRGHFGASASVGYOW 461
          Db
       554 YAIGYSSISDGGNWIIKGTASGNSRGHFGASASVGYQW 591
```

The protein and pharmaceutical compositions of Peak et al appear to be the same as the claimed invention.

Since the Office does not have the facilities for examining and comparing applicant's protein and pharmaceutical compositions with the protein and pharmaceutical compositions of the prior art, the burden is on the applicant to show a novel or unobvious difference between the claimed product and the product of the prior art (i.e., that the protein and pharmaceutical compositions of the prior art does not possess the same material structural and functional characteristics of the claimed protein and pharmaceutical compositions). See In re Best, 562 F.2d 1252, 195 USPQ 430 (CCPA 1977) and In re Fitzgerald et al., 205 USPQ 594.

5. Claim 61 is rejected under 35 U.S.C. 102(e) as anticipated by Peak et al (U. S. Patent No.6,197,312 B1 published March 2001, filed August 19, 1999).

Claim 61 is directed to an isolated protein having at least 90% sequence identity to SEQ ID NO:23 or SEQ ID No.35, wherein the isolated protein is immunogenic.

Peak et al teach proteins from *Neisseria meningitidis* and pharmaceutical compositions containing the polypeptide (see the Abstract and columns 16-18). Peak et al teach a *N. meningitidis* protein (SEQ ID NO:21) that has the amino acid sequence that is 98.1% identity to SEQ ID NO:23. The protein and pharmaceutical compositions of Peak et al appear to be the same as the claimed invention.

	cal :	98.1%; Score 2550.5; DB 2; Length 591; Similarity 86.6%; Pred. No. 6.2e-198; 2; Conservative 0; Mismatches 0; Indels 79; Gaps 1	;
QУ	1	MNKIYRIIWNSALNAWVVVSELTRNHTKRASATVKTAVLATLLFATVQASANNE 5	4
Db	1		0
QУ	55	5	4
Db 120	61	YLDPVQRTVAVLIVNSDKEGTGEKEKVEENSDWAVYFNEKGVLTAREITLKAGDNLKIKQ	
Qy 101	55	TDLTSVGTEKLSFSANGNKVNITSDTKGLNFAKETAGTNGDTTVHLN	
Db 180	121		
Qy 161	102	GIGSTLTDTLLNTGATTNVTNDNVTDDEKKRAASVKDVLNAGWNIKGVKPGTTASDNVDF	
Db 240	181		
Qy 221	162	VRTYDTVEFLSADTKTTTVNVESKDNGKKTEVKIGAKTSVIKEKDGKLVTGKDKGENGSS	
Db 300	241		
Qy 281	222	TDEGEGLVTAKEVIDAVNKAGWRMKTTTANGQTGQADKFETVTSGTNVTFASGKGTTATV	
Db 360	301		
Qy 341	282	SKDDQGNITVMYDVNVGDALNVNQLQNSGWNLDSKAVAGSSGKVISGNVSPSKGKMDETV	
Db 420	361		
Qy 401	342	NINAGNNIEITRNGKNIDIATSMTPQFSSVSLGAGADAPTLSVDGDALNVGSKKDNKPVR	
Db 480	421		
Qy 461	402	ITNVAPGVKEGDVTNVAQLKGVAQNLNNRIDNVDGNARAGIAQAIATAGLVQAYLPGKSM	
Db 540	481		

Peak et al teach a *N. meningitidis* protein (SEQ ID NO:21) that has the amino acid sequence that is 99.3% identity to SEQ ID NO:35.

```
Query Match
                 99.3%; Score 2333; DB 2; Length 591;
 Best Local Similarity 100.0%; Pred. No. 3.7e-181;
 Matches 458; Conservative 0; Mismatches 0;
                                               0;
                                       Indels
                                                 Gaps
0;
        4 TDLTSVGTEKLSFSANGNKVNITSDTKGLNFAKETAGTNGDTTVHLNGIGSTLTDTLLNT 63
QУ
          134 TDLTSVGTEKLSFSANGNKVNITSDTKGLNFAKETAGTNGDTTVHLNGIGSTLTDTLLNT
Db
193
       64 GATTNVTNDNVTDDEKKRAASVKDVLNAGWNIKGVKPGTTASDNVDFVRTYDTVEFLSAD
QУ
123
          194 GATTNVTNDNVTDDEKKRAASVKDVLNAGWNIKGVKPGTTASDNVDFVRTYDTVEFLSAD
Db
253
       124 TKTTTVNVESKDNGKKTEVKIGAKTSVIKEKDGKLVTGKDKGENGSSTDEGEGLVTAKEV
QУ
183
          254 TKTTTVNVESKDNGKKTEVKIGAKTSVIKEKDGKLVTGKDKGENGSSTDEGEGLVTAKEV
Db
313
       184 IDAVNKAGWRMKTTTANGOTGOADKFETVTSGTNVTFASGKGTTATVSKDDOGNITVMYD
QУ
243
          Db
       314 IDAVNKAGWRMKTTTANGQTGQADKFETVTSGTNVTFASGKGTTATVSKDDQGNITVMYD
373
       244 VNVGDALNVNQLQNSGWNLDSKAVAGSSGKVISGNVSPSKGKMDETVNINAGNNIEITRN
Qy
303
          374 VNVGDALNVNQLQNSGWNLDSKAVAGSSGKVISGNVSPSKGKMDETVNINAGNNIEITRN
Dh
433
       304 GKNIDIATSMTPQFSSVSLGAGADAPTLSVDGDALNVGSKKDNKPVRITNVAPGVKEGDV
QУ
363
          434 GKNIDIATSMTPOFSSVSLGAGADAPTLSVDGDALNVGSKKDNKPVRITNVAPGVKEGDV
Db
493
QУ
       364 TNVAQLKGVAQNLNNRIDNVDGNARAGIAQAIATAGLVQAYLPGKSMMAIGGGTYRGEAG
423
```

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Since the Office does not have the facilities for examining and comparing applicant's protein and pharmaceutical compositions with the protein and pharmaceutical compositions of the prior art, the burden is on the applicant to show a novel or unobvious difference between the claimed product and the product of the prior art (i.e., that the protein and pharmaceutical compositions of the prior art does not possess the same material structural and functional characteristics of the claimed protein and pharmaceutical compositions). See <u>In re Best</u>, 562 F.2d 1252, 195 USPQ 430 (CCPA 1977) and In re Fitzgerald et al., 205 USPQ 594.

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Status of Claims

7. Claims 33-34, 49-52, 54-55 and 57-60 are free of the cited art and are allowable.

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Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vanessa L. Ford whose telephone number is (571) 272-0857. The examiner can normally be reached on 9 am- 6 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Mondesi can be reached on (571) 272-0856 the fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Vanessa L. Ford/ Patent Examiner, Art Unit 1645 November 20, 2008

/Robert B Mondesi/ Supervisory Patent Examiner, Art Unit 1645